

present time, I would say that it is extremely difficult to arrive at any correct conclusion, this arises from the fact that the migration almost always passes by, or over the Island, after dark, and our means of judging is by comparison with others of the number of flocks heard whistling as they flew overhead. It is however certain that for a number of years fewer birds have stopped on the coast than formerly, and for a shorter period. We are, however, liable any year, when all the conditions are favorable, to have an immense landing.

To those interested in this direction I give the following result of some inquiry I made recently of two game dealers in Boston. About four years ago the shipment of Golden Plover, Eskimo Curlew, and Bartramian Sandpipers first commenced in the spring, and it has been on the increase up to date. Last spring (1890) these two firms received from Nebraska (principally), Saint Louis, and Texas (Fort Worth) *twenty barrels* of birds, one third of which were Golden Plover, two thirds Bartramian Sandpipers; *eight barrels* of Eskimo Curlew; *twelve barrels* of Eskimo Curlew and Golden Plover. As there are *twenty-five* dozen Curlew, and *sixty dozen* Plover each to a barrel, it will be realized what this means, if other large cities are similarly supplied. All were killed on their northern migration to their breeding grounds. Therefore while we may not be able now to answer the question: are they fewer than formerly, we shall be ably fitted to do so in a few years.

A LIST OF BIRDS OBSERVED AT SANTAREM. BRAZIL.

BY CLARENCE B. RIKER.

With Annotations by Frank M. Chapman.

(Continued from Vol. VII, p. 271.)

76. *Pipra aureola flaviceps* (Sch.).—Two adult males taken July, 1887, in low fruit-bearing trees growing in a semi-palm forest.

[I refer these specimens to *flaviceps*, as both exhibit a white spot on the outer rectrix. They are, however, indistinguishable from a Cayenne specimen.—F. M. C.]

77. *Pipra rubricapilla* Temm.—Common and gregarious.

78. *Chiroxiphia pareola* (Linn.).—Common in the second growth of the lowlands; not seen on the 'mountain'.

79. *Manacus manacus* (Linn.).—Common about campos and lowlands; not seen on the 'mountain.' In flying they make a humming noise with their wings and a cracking sound with their bills, the latter resembling the sound produced by the striking together of two pebbles.

80. *Heterocercus flavivertex* Pelz.—An immature male taken June 4, 1887.

81. *Tityra cayana* (Linn.).—A male taken July 15, 1887.

82. *Tityra semifasciata* (Spix).—A male and female taken in June, 1887.

83. *Tityra albitorques* Du Bus.—A male taken July 15, 1887. These birds frequent the treetops. The notes of this species and the two preceding are distinguished by a guttural, clucking sound.

[84. *Hadrostromus minor* (Less.).—A male taken by Smith, March 26 1889.—F. M. C.]

85. *Pachyrhamphus atricapillus* (Gm.).—A female taken July 4, 1887.

[86. *Pachyrhamphus rufus* (Bodd.).—A female taken by Williams has the grayish nuchal band very narrow but complete.—F. M. C.]

[87. *Pachyrhamphus cinereus* (Bodd.).—"Santarem, June 5; common near the town.*]

88. *Lathria cinerea* (Vieill.).—Common on the 'mountain.' Their call, which resembles the syllables *we-we-you*, the two former with a rising, the latter with a falling, accent, was never heard except when the birds were startled by the report of a gun.

89. *Lipaugus simplex* (Licht.).—Common in the lowlands.

[90. *Attila* sp. *incog.*—A female collected by Williams is apparently closely related to *A. citriniventris* Scl. The upper surface agrees with Sclater's description of the male of that species, but the lower parts are quite uniformly cinnamonaceous, with the abdomen scarcely lighter than the breast, and the chin fulvous, not cinereous. It is not improbable that this bird may be the as yet undescribed female of *A. citriniventris*.—F. M. C.]

91. *Attila viridescens* Ridgw.

Attila viridescens RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 522.

A male taken on the 'mountain' July 5, 1887.

[Differs from the type of *A. sclateri* in having the belly unmarked with yellow or yellowish green and in the almost total absence of this color from the flanks.—F. M. C.]

92. *Cotinga cærulea* (Vieill.).—A male taken July 4, 1887. Said by the natives to be common in the fall, feeding on the fruit trees of the lowlands.

93. *Cotinga cayana* (Linn.).—One male taken.

94. *Querula cruenta* (Bodd.).—Two males and a female taken respectively on July 4 and 5, 1887, in a dense forest on the 'mountain' where

they were found feeding with *Cassicus persicus* amongst the treetops; their note was a strange grunting sound.

[95. *Gymnoderus fœtidus* (Linn.).—A specimen taken by Smith, April 15, 1889.—F. M. C.]

96. *Furnarius pileatus* Scl. & Salv.—Common on mud banks near the river, where it was probably feeding on ants. It has a characteristic twitch of the tail resembling the movement of a Sandpiper.

[An adult male taken June 17, 1887, is the second recorded specimen of this species, the type of which was collected at Santarem.—F. M. C.]

[97. *Furnarius minor* Pelz.—One specimen collected by Smith in February, and a male and female collected by Williams in July. The female resembles the male in coloration, but exhibits what is apparently a trace of albinism in having two upper primary coverts of the right, and three of the left, wing, pure white.—F. M. C.]

[98. *Synallaxis guianensis* (Gm.).—A male taken by Williams, June, 1883.—F. M. C.]

99. *Synallaxis cinnamomea* (Gm.).—Common amongst wild rice about the marshes and river.

[100. *Synallaxis mustelina* Scl.—A male taken by Williams, May, 1883. Not before recorded from the Lower Amazon.—F. M. C.]

101. *Synallaxis rutilans* Temm.—Common; found running about fallen leaves in semi-palm forests.

102. *Berlepschia rikeri* Ridgw.

Picolaptes rikeri RIDGW., Proc. U. S. Nat. Mus., IX, 1886, p. 523.

Berlepschia rikeri RIDGW., *ibid.*, X, 1887, p. 151.—SCL., Ibis, 1889, p. 351, pl. xi.

The single specimen collected of this species was found August 1, 1884, near the border of a palm forest, creeping about amongst the branches of a palm.

103. *Philydor erythrocerus* (Pelz.).—A female taken on the 'mountain' July 15, 1887, resembled a Thrush in its movements.

104. *Glyphorhynchus cuneatus* (Licht.).—Common about houses and clearings.

105. *Dendrocincla fuliginosa* (Vieill.).

Dendrocincla rufo-olivacea RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 493.—SCL., Ibis, 1889, p. 353.

Dendrocincla fuliginosa SCL., Cat. Bds. B. M., XV, 1890, p. 165.

A male and female taken on the 'mountain' June 15 and 16, 1887.

[With Mr. Ridgway I have been unable to compare these specimens with *D. fuliginosa* (Vieill.), and I therefore follow Mr. Sclater, who has examined the type of *D. rufo-olivacea*, in placing them under Vieillot's species.—F. M. C.]

106. *Dendrocincla castanoptera* Ridgw.

Dendrocincla castanoptera RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 494.

Dendrocincla merula SCL., Cat. Bds. B. M., XV, 1890, p. 168.

A male and female taken June 15, 1887, in a forest in the lowlands, feeding in advance of an army of ants.

107. *Dendrocolaptes certhia* (Bodd.).

Dendrocolaptes obsoletus RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 527, nec LICHT., Abb. Akad. Berl., 1819, p. 203.

Dendrocolaptes certhia SCL., Cat. Bds. B. M., XV, 1890, p. 173.

A male and female taken July 1, 1887, in the lowlands.

[Mr. Scater, who has examined the type of *D. obsoletus* Ridgw., considers it inseparable from *D. certhia* Bodd. Of the last-named species I have no examples for comparison, and as in any case the name *obsoletus* is preoccupied, I follow Mr. Scater in referring these specimens, for the present at least, to *D. certhia*.—F. M. C.]

108. *Nasica longirostris* (Vieill.).—Seen only about the river, where it was common.

109. *Dendroornis susurrans* (Jard.).

Dendroornis fraterculus RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 526,

Dendroornis susurrans ELLIOT, Auk, 1890, p. 171.

A male taken June 10, 1887, in a semi-palm forest twenty miles from the river.

[Mr. Elliot's examination of the type and single known specimen of *D. fraterculus*, resulted in his referring it to *D. susurrans* (Jard.) and with this decision it may be well to agree until further material shall more strongly urge the claims of *fraterculus* to recognition.—F. M. C.]

[110. *Dendroornis multiguttata* (Laf.).—Three apparently adult females taken by Williams in June and July, 1883. Mr. Elliot in his recent review of the genus *Dendroornis* (Auk, 1890, p. 175) mentions these specimens one of which, taken July 30, he considers typical of *D. multiguttata*, while the remaining two are said to "probably merely represent a reddish phase of plumage, which I have noticed occurs sometimes with other species of the genus." This view may account for the marked differences in coloration which exist between the single July and the two June specimens, but it does not so well explain the differences shown by the following measurements (in inches):

		Wing	Tail	Tarsus	Bill from Nostril
July 30, 1883,	♀	3.85	3.25	.82	.74
June, "	♀	3.40	2.70	.75	.70
" "	♀	3.45	2.86	.74	.62

It is not improbable that the largest specimen may have been incorrectly sexed, when these differences of size and coloration might be considered sexual. At any rate the present material is not conclusive, and further specimens alone will decide whether these two small, reddish birds are specifically identical with *D. multiguttata*.—F. M. C.]

111. *Dendroornis eytoni* SCL.—A single specimen taken on the 'mountain' July 4, 1887.

112. *Dendroplex picus* (Gm.).—A female taken June 13, 1887.

113. *Picolaptes layardi* SCL.—A single specimen taken on the 'mountain, July 4, 1887.

114. *Cymbilanius lineatus* (Leach).—Three specimens taken in June, 1887.

[115. *Thamnophilus melanurus* Gould.—A female taken by Smith January 26, 1889.—F. M. C.]

116. *Thamnophilus simplex* Sel.—A male taken June 4, 1887.

[In general coloration this specimen agrees exactly with the description and plate of *T. simplex* (Ibis, 1873, p. 387, pl. 15), but the cap is distinctly blackish and not concolor with the plumbeous back as it is stated to be in *T. simplex*. The type of *simplex*, however, taken in January, may have been a bird of the year, having the black cap as yet undeveloped.—F. M. C.]

117. *Thamnophilus luctuosus* (Licht.).—A male and female taken near the border of streams.

[The female does not agree with Tschudi's description of the female of this species (Fauna Per., p. 172), but differs from the male only in being slightly smaller and in having the cap chestnut instead of black. Of three specimens collected by Smith one has the cap chestnut, in the others it is black. There is no indication of sex on the labels, but the chestnut-capped bird is the smallest of the three.—F. M. C.]

[118. *Thamnophilus nigrocinereus* Sel.—A male taken by Smith, January 23, 1889.—F. M. C.]

119. *Thamnophilus nævius* (Gm.).—A male taken June 13, 1887, in the lowlands.

120. *Thamnophilus ambiguus* Sw.—A female taken June 13, 1887, in the lowlands, climbing about vines, had a nervous, twitching movement of the tail.

121. *Thamnophilus inornatus* Ridgw.

Thamnophilus inornatus RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 522.

A male taken June 30, 1887, amongst the vines and underbrush of a dense forest on the 'mountain.'

[Agrees in size and general coloration with a specimen of *T. murinus* Pelz. from Merumé Mountains, British Guiana (Whitely). It may be distinguished from that species, however, by the absence of apical spots on the wing-coverts and tail; and the concealed white interscapular spot is also wanting.—F. M. C.]

122. *Thamnophilus radiatus nigricristatus* (Lawr.).—A male taken in the lowlands July 15, 1884.

[While not fully adult, this specimen is sufficiently mature for comparison with the types of *nigricristatus* with which, allowing for the difference in age, it agrees.—F. M. C.]

123. *Myrmotherula axillaris melanogastra* (Spix).—[Comparison of the four specimens in the Riker collection with *M. axillaris* from Bogota and *M. a. melanogastra* from Bahia, prove them to be much nearer the latter than the former. In the coloration of the dorsal surface they exactly agree with the Bahia bird, but in the color of the flanks and tipping of the tail-feathers are evidently intermediate between it and true *axillaris*. A male taken June 16, 1887, has the feathers of the entire

breast pure white for three fourths their basal length, the apical portion being of the normal black.—F. M. C.]

[124. *Myrmotherula cinereiventris* *Scl.*—A male taken by Williams June 25, 1883.—F. M. C.]

125. *Dichrozona zonota* *Ridgw.*

Dichrozona zonota RIDGW., Proc. U. S. Nat., Mus., X, 1887, p. 524.

A male taken July 4, 1887.

[126. *Formicivora grisea* (Bodd.).—A male taken by Williams, June, 1883, and a female by Smith without date of capture.—F. M. C.]

[127. *Formicivora rufa* (*Wied.*).

Thamnophilus rufater LAFR. & D'ORB., Syn. Av., p. 12 (Mag. de Zool., 1837).

Formicivora rufa ALLEN, Bull. A. M. N. H., II, 3, 1889, p. 253.

[A male taken by Williams is slightly darker above than Chapada, Mitto Grosso, specimens, and the feathers of the head are centrally streaked with black. This record apparently extends the range of this species from Pernambuco to the Lower Amazon.—F. M. C.]

128. *Hypocnemis lugubris* (*Cab.*).—An adult male taken July 11, 1887, in the underbrush of the lowlands.

[A male taken by Williams, June 25, 1883, is not fully adult; the black feathers of the throat and sides of the neck have whitish tips and there are traces of brown throughout the plumage. In Mr. Riker's specimen the outer web of the primary coverts is margined with grayish white, and this color appears in faint terminal spots on the greater and lesser wing-coverts.—F. M. C.]

129. *Hypocnemis hypoleuca* (*Ridgw.*).

Heterocnemis hypoleuca sp. nov.? RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 523.

A female taken July 11, 1887, in company with the preceding.

[Mr. Sclater, to whom I have forwarded a second and typical female of this species taken by Williams, June 26, 1883, writes me that it is not the female of *Heterocnemis argentata* (Des Murs), which by Mr. Ridgway was considered possible (*l. c.*), but belongs to a species closely allied to *Hypocnemis lugubris*.—F. M. C.]

130. [*Rhototerpe torquata* (*Bodd.*).—"Deep woods near Santarem, May 19; common."*]

131. *Phlogopsis bowmani* *Riker.*

Phlogopsis bowmani RIKER MS., RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 524.

Two adult males taken July 15, 1887, in a dense forest on the 'mountain,' feeding upon the insects preceding the army ants.

132. *Rhegmatorhina gymnops* *Ridgw.*

Rhegmatorhina gymnops RIDGW., Proc. U. S. Nat. Mus., X, 1887, p. 525.

Gymnopathys gymnops SCL., Cat. Bds. B. M., XV, 1890, p. 297.

*Allen, Bull. Essex Inst., Vol. VIII, No. 8, 1876, p. 80.

A pair taken July 15, 1887, were found associated with *Phlogopsis bowmani*.

[The elongated and stiffened feathers of the crown and more rounded tail of this species appear to me to be sufficiently good characters on which to separate it generically from *Gymnophithys*.—F. M. C.]

133. *Eupetomena macroura* (Gm.).—A male and female taken on the campos, July 14, 1884.

134. *Thalurania glaucopsis* (Gm.).—Three females taken in June and July, 1887.

135. *Thalurania furcatoides* Gould.—A male taken August 2, 1884.

136. *Eucephala cærulea* (Vieill.).—Common during June and July of 1884 and 1887.

[137. *Antrostomus sp. incog.*—A female collected by Smith, January 23, 1889, measures: wing 5.00; tail, 3.70 in. The crown is almost entirely black, the spots on the quills, the tail-bars, and the abdomen are buffy.—F. M. C.]

138. *Nyctidromus albigollis* (Gm.).—Common.

[139. *Picumnus cirratus* Temm.—A female in faded and worn plumage collected by Williams, September 3, 1883, is provisionally referred to this species. The abraded condition of the plumage renders its characters too obscure to permit positive identification.—F. M. C.]

[140. *Ceophlæus tracheolopyrrhus* (Malh.).—An adult male taken by Smith, January 24, 1889.—F. M. C.]

141. *Ceophlæus lineatus* (Linn.).—Common.

142. *Ceophlæus melanoleucus* (Gm.).—Two females taken during June and July, 1887.

143. *Chloronerpes affinis selysi* (Malh.).—Two males and a female taken during June and July.

[They differ from Bahia specimens (*affinis*) only in the restriction of the yellow nuchal band.—F. M. C.]

[144. *Chloronerpes flavigularis* (Bodd.).—A female collected by Smith March 15, 1889, agrees with Malherbe's plate of *Chloropicus chlorocephalus*, but is quite different from Guianan specimens of *flavigularis* in the Lawrence Collection, which have the white markings of the throat guttate, or scutiform, while in the Santarem specimen they are broadly triangular.—F. M. C.]

145. *Chrysoptilus guttatus* (Spix).

Picus guttatus SPIX, Av. Bras., I, 1824, p. 61, pl. viii.

An adult female and an immature male, taken respectively July 13 and June 23, 1887, in the flooded districts on the banks of the river.

[These specimens differ from a Venezuelan example, identified as *C. punctigula* by Mr. Schater, in being slightly smaller, paler, and less heavily spotted below, and especially in the pattern of coloration of the black and white markings of the throat. In the Venezuelan bird the feathers of this region are white with a central black streak which is broadest basally and after a slight sub-terminal constriction widens at the tip. In the Santa

rem birds these feathers are black with two white apical spots. From the southern form of *C. punctigula*, *C. p. punctipectus* (Cab. & Hein.*) it may be distinguished by its *darker* coloration and by the same characters in the pattern of the throat feathers which separate it from *C. punctigula*. *Chrysophilus speciosus* Scl. (= *C. punctipectus* Tacz., Orn. Peru, III, p. 88, *nec* Cab. & Heine.) I have not seen; it is evidently closely related to, but larger than, the Lower Amazonian form. The *Picus guttatus* of Spix, described from the Amazon, has by authors been synonymized with the earlier *Picus punctigula* (Bodd.). While Spix's description is not sufficiently detailed to render certain the form he had in hand, the locality he gives, "*in sylvis fl. Amazonum*," makes it extremely probable his specimens were similar to the Santarem bird.

Measurements (in inches) of four forms are appended.

		Wing	Tail	Exposed Culmen
<i>C. punctigula</i> , Venezuela,	♀ ad.	4.42	2.78	.86
<i>C. p. punctipectus</i> , Rio,	♀ ad.	4.48	3.08	.62
<i>C. guttatus</i> , Santarem,	♀ ad.	4.28	2.70	.91
" " "	♂ im.	3.97	2.50	.75
<i>C. speciosus</i> , Upper Amazon,	♂ ad.	4.71	3.26	1.02†

146. *Melanerpes cruentatus* (Bodd.). — Common about plantations in the lowlands, puncturing holes in oranges.

147. *Celeus ochraceus* (Spix). — A female taken June, 1887, near the river.

148. *Celeus citrinus* (Bodd.). — A male taken June 16, and a female, July 5, 1887. Feet and feathers covered with a sticky substance in which were matted quantities of ants. The only reason for this I can advance is that they enter the nests of wild bees in quest of young bees or honey.

[The male is quite different from Guianan specimens and has only the inner half of the inner web of the secondaries brown; the female, however, has the whole inner web and inner half of the outer web brown, while the outer and median secondaries are wholly brown. If separable as a form from the Guianan bird the synonymy might stand as follows: *Picus flavicans* SPIX, Av. Bras., I, p. 60, pl. li, fig. 2, *nec* *Picus flavicans* LATH., Ind. Orn., I, p. 240 = *Picus citrinus* BODD., Tabl. Enl. p. 30. No. 509.

(To be concluded.)

* Mus. Hein., IV, 1863, p. 163.

† Tacz., Orn. Peru, III, p. 88.